

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**APPLICANT:** J.H. Stott, et al.

**SERIAL NO.** Div. of 09/068,131

**EXAMINER:** B. Pendleton (Parent Appln.)

**FILED:** Herewith

**GROUP:** 2747 (Parent Appln.)

**FOR:** METHOD AND APPARATUS FOR REDUCTION OF UNWANTED  
FEEDBACK

Assistant Commissioner for Patents  
Washington, D.C. 20231

**CERTIFICATE OF MAILING**

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service, in an envelope as "Express Mail Post Office Addressee" Mailing Label Number TB555345285US addressed to the Commission of Patents and Trademarks, Washington, D.C. 20231 on February 12, 2001.

By: Deborah Barfield  
Deborah Barfield

**PRELIMINARY AMENDMENT**

Sir:

Please preliminarily amend the subject application as follows and before calculating the filing fee therefor:

**IN THE SPECIFICATION**

Please amend the specification as follows.

Page 1, before line 1 insert the following -- This application is a divisional of co-pending U.S. application serial number 09/068,131, filed April 30, 1998, now allowed, the teachings of which are incorporated herein by reference.--

Page 5, line 4, delete "324" and replace with --342--.

Page 7, line 20, delete "3" and replace with --4--.

Page 7, line 22, delete "4" and replace with --5--.

Page 8, line 1, delete "4" and replace with --5--.

Page 15, line 1, delete "116" and replace with --42--.

Page 15, lines 12 and 26, and page 17, line 16, after "9522150.3" insert --  
published under number 2,306,012--.

Page 17, line 33, after the period, insert --In other words, as described in the  
aforementioned application, they delay  $T_L$  is greater than the unwanted delay in the  
feedback loop.--

Page 25, line 26, delete "receive" and replace with --receiver--.

Page 33, lines 3 to 6, delete "United Kingdom....priority therefrom" and replace  
with --European Patent Application No. 0 772 810 entitled "OFDM Active Deflector".--

#### IN THE CLAIMS

**Cancel** claims 1 through 20 without prejudice.

Please add the following new claims 21 to 31.

-- 21. An RF active deflector for use with orthogonal frequency division  
multiplex signals, comprising;

an input antenna for receiving an RF input signal;

an output antenna for transmitting an RF signal on substantially the same  
frequency as said input signal;

an amplification path between said input antenna and said output antenna,  
said amplification path providing substantially linear processing and including a  
delay;

means responsive to the signal in the amplification path for producing a plurality of control coefficients;

a transversal filter receiving said signal in said amplification path and controlled by said control coefficient to provide a modified signal; and

a combiner for combining said modified signal with said signal in said amplification path so as to reduce the effect of the feedback.

22. An RF active deflector according to claim 21, in which said means for producing a plurality of control coefficients comprises:

means for passing through said amplification path a signal having an auto-correlation function which is substantially a delta function; and

a correlator for correlating said signal before being delayed in the delay with the signal after being delayed in the delay to produce a plurality of correlation coefficients.

23. An RF active deflector according to claim 21, in which said means for producing a plurality of control coefficients comprises:

means for introducing into said amplification path a noise signal having an auto-correlation function which is substantially a delta function; and

a correlator for correlating the signal before the delay with the noise signal to produce a plurality of correlation coefficients.

24. An RF active deflector according to claim 23, including means for combining said modified signal with said signal in said amplification path before said delay.

25. An RF active deflector according to claim 21, in which the amplification path includes a variable-gain amplifier.

26. An RF active deflector according to claim 25, in which the gain of said variable-gain amplifier is initially at a relatively low value and is increased as the feedback is reduced.

27. An RF active deflector according to claim 23, in which said correlator includes:

means for multiplying one of said signals before the delay and said noise signal by a plurality of incrementally-delayed versions of the other; and

means for selecting and accumulating the resultants of the multiplication for a time duration substantially equal in length to that of a data period of the RF signals, to produce said plurality of correlation coefficients.

28. An RF active deflector according to claim 27, in which the multiplication is a complex multiplication.

29. An RF active deflector according to claim 27, further comprising integrating means coupled to the output of the selecting and accumulating means for integrating the output thereof.

30. An RF active deflector according to claim 21, in which said delay is a variable delay, and including means for reducing the delay period of said delay from an initial value as the feedback is reduced.

31. An RF active deflector according to claim 21, in which the active deflector is used in conjunction with at least one broadcast receiver, and the tuning of the active deflector is controlled in response to a remote control device which operates the broadcast receiver.

**REMARKS**

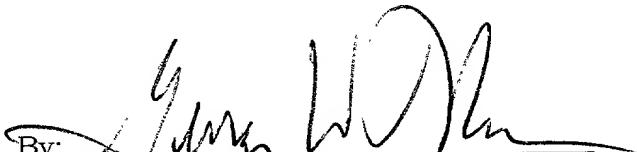
Applicants respectfully request that the subject application be preliminarily amended as provided in the foregoing amendment prior to calculation of the filing fees.

The specification was amended to rectify obvious typographical, punctuation, and grammatical errors.

It is respectfully submitted that the subject application is in a condition for allowance. Early and favorable action is requested.

Applicants believe that additional fees are not required for consideration of the within Preliminary Amendment. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge Deposit Account No. **04-1105**.

Respectfully submitted,

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